

HEAT



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There are **3** ways heat moves

1. **Conduction**: Heat moves from one solid to another through touching

For example, an iron heats up then heats clothing through touch.

Last week, we learnt that some materials are good conductors (metal) while others are poor conductors (wood).



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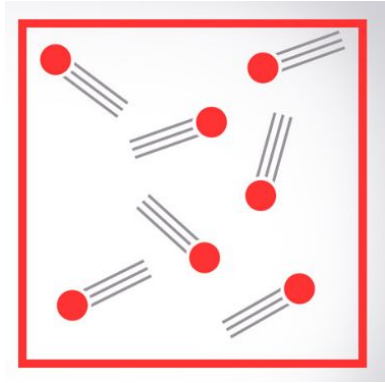
There are 2 more ways heat is transferred

Convection and Radiation

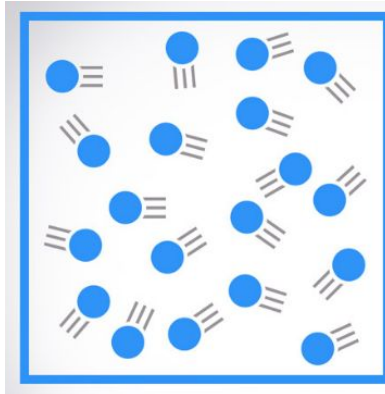
Time to be molecules again...

HEAT

Hot molecules move fast and spread out. They become less dense (lighter).



Cold molecules move slower and are packed together closer. They become more dense (heavier)

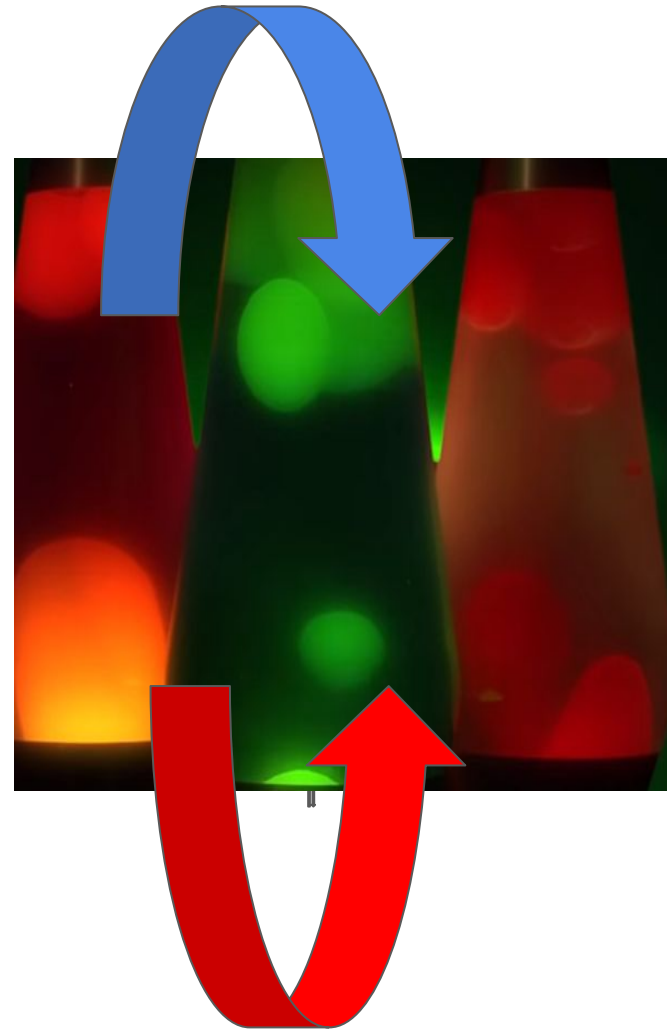


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2. **Convection**: Let's look at a lava lamp

<https://www.youtube.com/watch?v=myjngtM9zrg>

- A light bulb at the bottom of the lamp heats the oil and water. The oil heats up quicker.
- As the oil heats up it becomes less dense, lighter and rises to the top.
- When it begins to cool, it becomes more dense and sinks to the bottom.



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3. *Radiation*:

- Heat can move through empty space through infra-red rays
- You can't see these rays
- Once they reach a solid or liquid they begin to heat it up
- This is how the sun heats the earth

